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| 10/650,407 | 08/27/2003 | Ricky W. Purcell | 1443.052US1 | 6552 |
| 21186 7590 01/09/2008 SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402 | | | EXAMINER PATEL, TARLA R | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/650,407

Applicant(s)

PURCELL, RICKY W.

Examiner

Tarla R. Patel

Art Unit

3772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/10/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-2 and 4-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang et al. (5,658,583) in view of Usui (5,879,378).

Zhang et al. discloses a heat patch comprising of an enclosure having gas-permeable first layer (26) and second layer (16) bonded together, where in gas permeable first layer includes an inner surface and an outer surface (see fig 1), wherein the entire first layer is gas-permeable (column 6 lines 9-20) and a heating composition (28) is located inside the enclosure, which generates heat (column 6 lines 22-28) when a gas is received through first layer. A gas-permeable cover (31) is detachably mounted to said outer surface of first layer (column 6 lines 16-20).

With respect to claim 2, Zhang et al. discloses heat patch include heating composition that comprise iron powder, carbon (reaction promoter), water retaining agent, chloride (salt) and water (column 4 lines 1-4).

With respect to claim 4, Zhang et al. discloses first layer is polyethylene (column 4 lines 5-7).

With respect to claim 7, Zhang et al. discloses a heat patch comprising a heating composition that is capable of generating heat when air is passed through first layer (column 6 lines 22-28).

With respect to claim 8, Zhang et al. discloses a heat patch gas-impermeable cover includes a plurality of portions (31 shown in figure 1) detachably mounted to outer surface of gas-permeable first layer (column 11, lines 7-11).

However, Zhang et al. does not disclose that the gas-permeable first layer is bonded to a perimeter of second layer.

However, Usui teaches an exothermic device and an application pad using the same having first layer (6) is bonded to a perimeter of second layer (5, see figs 1 and 3, see column 23 lines 54-63). at the time of the invention was made, it would have been obvious to one having ordinary skill in the art to modify the first layer of the Zhang et al.'s device to bond to a

perimeter of second layer of the device, as taught by Usui to form continuous surface and to better seal the whole device to avoid any exposure to excess air.

With respect to claims 5-6, Zhang et al. substantially disclose the invention, see rejection to claim 1 above; however, Zhang et al. does not disclose a heat patch having a second layer and cover each being made of polyethylene film.

However, Usui teaches a heat patch having gas permeable first and second layers made of polyethylene film (column 5 lines 18-24). At the time of the invention was made, it would have been obvious to one skilled in the art to modify the heat patch of Zhang et al. to have polyethylene film second layers to have better flow of air to the composition and more heat to the skin being treated of the user, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

It would have also been obvious to one having ordinary skill in the art at the time the invention was made to make the cover of Zhang et al. with polyethylene film as taught by Usui to have better air permeability through

it, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

4. Claims 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang et al. (5,658,583) and Usui (5,879,378) in view of Kuratomi et al. (4,747,841).

Zhang et al. and Usui substantially disclose the invention, see rejection to claim 8 above; however Zhang et al. does not specifically discloses a heat patch having a heating composition that maintains the temperature of second layer about 38°C-40°C, or 40°C-42°C, or 42°C-45°C when composition is exposed to air.

However Kuratomi discloses a heat patch it maintains the temperature of second layer to be at between or about 40°C-45°C when composition is exposed to air (column 2 lines 62-64) by removing sealing plate (14). The disclosed range of 40-45C meets the claim range limitation of claim 9-11, since it overlaps in at least part of each range. At the time of the invention was made, it would have been obvious to one skilled in the art to modify the heat patch of Zhang et al. to use Kuratomi's teaching of maintaining the temperature of second layer about 40-45 degree centigrade when the

membrane is exposed to air (gas) to be able to reach desirable temperature to allow more customize treatment of individual by the heat patch.

With respect to claims 10-11, Zhang et al. discloses plurality of portions (column 11, lines 7-12). Zhang et al. further disclose a few small pieces of tape (30) to peel off and cover opening (26) to regulate the airflow is equivalent to required plurality of portions including strips.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. and Usui, further in view of Ingram (5,366,491).

Zhang et al. and Usui substantially disclose the invention as claimed, see rejection to claim 8 above; however, Zhang et al. and Usui do not disclose a heat patch having plurality of portions with information related to heat generated by the heat patch when one or more portions is removed from the first layer.

However, Ingram discloses a heat patch with temperature indicating means (20) that includes a liquid crystal temperature-indicating strip (22), which indicates the temperature of the skin (column 4 lines 1-13). At the time of the invention was made, it would have been obvious to one skilled in the art to modify the heat patch of Zhang et al. and Usui to include the

temperature indicating strip of the Ingram's heat patch to allow monitoring the use of the heat patch for therapeutic level without damaging the user's skin with higher temperature.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al., Usui and Ingram, as applied to claims 13 above, further in view of Lachenbruch (6,755,852).

Zhang et al., Usui and Ingram substantially disclose the invention; however Zhang et al., Usui and Ingram do not disclose a heat patch having at least some of plurality of portions that are different colors, where the different colors give information related to heat generated by the patch, when one or more portions are removed from the first layer.

However, Lachenbruch discloses a body wrap for inducing a temperature change. The wrap includes a color-coded temperature indicator on the outside of the wrap (column 7 lines 23-29); the indication is shown by showing color change for temperature. At the time of the invention was made, it would have been obvious to one skilled in the art to modify the heat patch of Zhang et al., Usui and Ingram to include the color-coded temperature indicator which is taught by Lachenbruch to be able to easily

see the temperature change on the skin to have fastest response to remove it if temperature rise above the desirable temperature for therapy.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kunamoto (2006/0276863) discloses a warming tool with color change when there is change in the temperature of the pad.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarla R. Patel whose telephone number is 571-272-3143. The examiner can normally be reached on M-T 6-3.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on 571-272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-

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